Causative factors of osteoporotic hip fractures

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Background: Osteoporosis (OP) is a skeletal disorder characterized by compromised bone strength, which predisposes the individual to an increased risk of fractures of the hip, spine, and other skeletal sites. OP, a major public health problem, is becoming increasingly prevalent with the world population and occupies a leading place in the structure of morbidity and mortality.

Objectives: To study the causes of mortality in patients with hip osteoporotic fractures during 6 months after injury.

Methods: 432 patients with osteoporotic hip fractures were under observation. During the study, mortality rates were assessed both in hospital and during the first 6 months after the fracture. The main causes of mortality were tracked by ICD-10 classes. Information about fractures and their outcomes was obtained from databases of the alumni departments of Kemerovo, city registry offices, telephone interviews of patients and their relatives.

Results: In the first 6 months after injury, 95 out of 432 patients died. Overall mortality was 22.0%. In the group of deceased patients, females prevailed: 73 women (16.5%) and 22 men (5.1%) ($\chi^2 = 4.4; p < 0.0001$). It was established that 6 months after a hip fracture in 63 (66.3%) patients, death occurred from cardiovascular system diseases: in men - 13 (59.0%) cases and in women - 50 (68.4%) (p = 0.9). Respiratory diseases, as the cause of death, were detected in 18 (16.9%) patients (men - 5 (22.9%) cases and in women - 13 (17.8%) (p = 0.1), oncological diseases - in 10 (10.5%) men and women: 2 (9.1%) and 8 (10.9%) cases, respectively (p = 0.5). Diseases of the digestive system accounted for a small percentage of the total number of deaths (3.2%), without statistically significant differences by gender (1 (4.5%) case for men and 2 (2.9%) cases for women (p = 0.75)). Among the dead men, 1 (1.1%) death was caused by an infectious disease.

Conclusion: During all periods of observation, most of the deceased men and women had cardiovascular and respiratory diseases.

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